Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1 to 15 (withdrawn).

1. (withdrawn) A method of producing Bisphenol-A (BPA) from a product solution, characterized in that the product solution includes components that exhibit a phase equilibrium relationship which defines phase compartments represented by a projection of a polythermal ternary phase diagram, where solid Bisphenol-A and an adduct of Bisphenol-A and Phenol can crystallize respectively; and the composition of the product stream is selected such that substantially pure solid Bisphenol-A if formed by crystallization in a single stage.

2. (withdrawn) The method of Claim 1 wherein product stream is comprised of Bisphenol-A at a composition in a range of approximately 55 to 100 wt.%, and a solvent at a composition in a range of approximately 0 to 40 wt.%.

3.(withdrawn) The method of Claim 2 wherein said solvent is comprised of any one of Acetone, Water and mixtures thereof.

4. (withdrawn) The method of Claim 1 wherein the product stream is comprised of Bisphenol-A at a composition in a range of approximately 55 wt. %to 100 wt.%, and a solvent at a composition in a range of approximately 0 wt. % to 15 wt.%.

5. (withdrawn) The method of Claim 1 wherein the BPA crystallization is carried out at a temperature in the range of approximately 0 °C to 160 °C.

6. (withdrawn) The method of Claim 1 wherein the BPA crystallization is carried out at a temperature in the range of approximately 50 °C to 125 °C.

7. (withdrawn) The method of Claim 1 wherein the BPA crystallization in is carried out at a temperature in the range of approximately 70 °C to 100° C.

8. (withdrawn) A method of producing Bisphenol-A, comprising the steps of:

reacting Phenol and Acetone in the presence of a catalyst to form a product solution including at least Bisphenol-A and Phenol, and where the Bisphenol-A, Phenol and a solvent exhibit a phase equilibrium relationship between the components of the product solution such that they exhibit compartments represented by a projection of a polythermal ternary phase diagram where Bisphenol-A and an adduct of Bisphenol-A and Phenol can crystallize respectively;

providing the solvent in said product solution; and

crystallizing substantially pure solid Bisphenol-A in a crystallization stage at a selective composition of a feed stream to said crystallization stage such that substantially pure solid Bisphenol-A if formed.

9. (withdrawn) The method of Claim 8 where the solvent is comprised of Acetone, Water , or a mixture thereof.

10. (withdrawn) The method of Claim 8 further comprising:

removing at least a portion of the Phenol from the product solution to achieve the selective composition of the feed stream.

11. (withdrawn) The method of Claim 8 wherein the feed stream is comprised of Bisphenol-A at a composition in a range of approximately 55 wt. % to 100 wt.%, and a solvent at a composition in a range of approximately 0 wt. % to 40 wt.%.

12. (withdrawn) The method of Claim 8 wherein the feed stream is comprised of Bisphenol-A at a composition in a range of approximately 55 wt. % to 100 wt.%, and a solvent at a composition in a range of approximately 0 wt. % to 15 wt.%.

13. (withdrawn) The method of Claim 8 wherein the crystallizing step is carried out at a temperature in the range of approximately 0 °C to 160 °C.

14 (withdrawn) The method of Claim 8 wherein the crystallizing step is carried out at a temperature in the range of approximately 50 °C to 125 °C.

15. (withdrawn) The method of Claim 8 wherein the crystallizing step is carried out at a temperature in the range of approximately 70 °C to 100° C.

16. (previously amended) A system for producing Bisphenol-A, comprising:

a reactor unit wherein a product stream is produced including at least Bisphenol-A and Phenol; and

a BPA crystallizer stage, the crystallizer stage receiving the product stream and wherein the composition of the product stream is selectively adjusted such that substantially pure Bisphenol-A crystals are produced directly upon crystallization, without prior adduct crystallization.

17. (currently amended) The system of Claim 16 further comprising:

a mixer/separator unit located upstream of the BPA stage crystallizer, the mixer/separator unit being configured to selectively adjust the composition of the product stream fed to the BPA crystallizer stage.

18. (previously amended): The system of Claim 17 further comprising a partial phenol removal unit, located upstream of the BPA crystallizer stage, and being configured to selectively adjust the composition of phenol in the product stream.

19. (original) The system of Claim 18 further comprising:

a solvent recovery unit configured to recover solvent used in the system, the solvent recovery unit being coupled to at least any one, or more of, the reactor unit, mixer/separator or partial phenol removal unit to selectively adjust the composition of the product stream.

20. (original) The system of Claim 18 wherein the partial phenol removal unit is configured to adjust the composition of phenol in the product stream such that the product stream when fed to the BPA crystallizer stage does not contain more than 40 wt% phenol.

21. (original) The system of Claim 16 where the BPA crystallizer stage is comprised of one or more crystallizer units.

22. (previously amended) A system for producing Bisphenol-A, comprising:

a reactor unit wherein a product stream is produced including at least Bisphenol-A and Phenol;

a mixer/separator unit, the mixer/separator unit receiving the product stream from the reactor unit and being configured to selectively adjust the composition of the product stream by mixing with one or more recycle streams; and

a BPA crystallizer stage , the crystallizer stage receiving the product stream from the mixer/separator unit and whereupon crystallization substantially pure Bisphenol-A crystals are produced directly upon crystallization, without prior adduct crystallization.

23. (original) The system of Claim 22 further comprising a partial phenol removal unit, and a solvent recovery unit, both of said units producing recycle streams, and where one or more of the recycle streams are conveyed to the mixer/separator.

24. (original) The system of Claim 22 further comprising one or more processing units downstream of the BPA crystallizer stage, and wherein the one or more processing units produce recycle streams, and where one or more of the recycle streams are conveyed to the mixer/separator.

25. (previously amended) A system for producing Bisphenol-A, comprising:

a reactor unit wherein a product stream is produced including at least Bisphenol-A and Phenol;

partial phenol removal unit, the partial phenol removal unit receiving the product stream from the reactor unit, and being configured to selectively adjust the composition of phenol in the product stream ;

a mixer/separator unit, the mixer/separator unit receiving the product stream from the partial phenol removal unit and being configured to selectively adjust the composition of the product stream by mixing the product stream with one or more recycle streams ; and

a BPA crystallizer stage, the crystallizer stage receiving the product stream from the mixer/separator unit and whereupon crystallization substantially pure Bisphenol-A crystals are produced directly upon crystallization, without prior adduct crystallization.

26. (original) The system of Claim 25 further comprising a solvent recovery unit, the solvent recovery unit recovering solvent used in the system and being coupled to at least one, or more of, the partial phenol removal unit or the mixer/separator to selectively adjusting the composition of the product stream.

27. (original) The system of Claim 25 wherein the partial phenol removal unit is configured to adjust the composition of phenol in the product stream such that the product stream when fed to the BPA crystallizer stage does not contain more than 40 wt% phenol.